# Control Evaluation Information System Savings

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**Abstract** - The purpose of this research is to evaluate the control of information system savings in the banking and to identify the weaknesses and problem happened in those saving systems. Research method used are book studies by collecting data and information needed and field studies by interview, observation, questioner, and checklist using COBIT method as a standard to assess the information system control of the company. The expected result about the evaluation result that show in the problem happened and recommendation given as the evaluation report and to give a view about the control done by the company. Conclusion took from this research that this banking company has met standards although some weaknesses still exists in the system.

**Index Terms** - Control Information System, Savings

## 1. Introduction

Banking industry is one of the industries where the IT holds an important role. It needs a secure, fast, strong IS in every data processing in large amount and operations. Banking also has to adjust with the needed and request from the customer as a business strategy in a large scale. IT used in banking for whole of the business process.

According to Hu et al. [3], access control allowed the activities of legitimate user, implement control access in many place and different level by protecting the files and directories. The objectives are to described the term of protecting and make the information available to the users and application. The Access control policies are high level requirement that will show how access is managed and who, under the circumstances and may access the information. An access model is a formal presentation of the security policy enforced by the system and useful for proving the theoretical limitation of a system. According to Mishra and Dhillon [6], value in the internal control of IS important to be developed which it helps the company to control the objective in the three ways, first objective created with individual values help in grounding of conceptual factors, second internal control provide the theoretical framework for rigorous investigation, and third the value driven help to aligning the individual and organizational objective. Control of IS needs three main forms such as input, behavioral, and output. The scope of control becomes a highlight of management level where the control can be placed and specified.

This research will take a place in B. bank which has an IT architecture such Core Banking system become the main of the banking operational, Banking Delivery System to give the simplicity to the customer and Management Support system will support to make a decision about the information system.

## 2. Research Method

Research methods used are book studies and field studies. Book studies by done some research from reference books, and journal according to the research topic. Then for field studies, it done by interview through the expert to get some information about savings in the company, also done by doing an observation to looking for directly the ongoing information system in the company, then using the checklist to make the question about the control objective perspective and internal control of balance scorecard. Finally, questionnaires are used to obtain data using maturity level and internal perspective of COBIT.

## 3. Literature Research

According to Bank of Jamaica [1], internal control gives a design that can prove a reasonable assurance regarding in achievement of institution's objective. Internal control become a process that effected by the Institution BOD, management, and others to achieve the effectiveness and efficiency of operation and the readability of financial reporting that is compliant with the applicable laws and regulation. There's some factors that comprise the control environment, such: (1) BOD actively concerned in the corporate governance and they take a responsible to ensure that the institution is appropriately and effectively managed and controlled. (2) management can manages and operates the financial institution in a sound manner. (3) a control procedure supported by the effective management information system to exposure the risk, and (4) an independent audit mechanism to monitor the effectiveness of the control procedures. The scope of control system are utilized by the institution to conduct their business depend on the nature and diversify of business, volume, size and complexity of transaction in IT.

According to Bone [2], IT control becomes critical for the company to understanding the assurance against the standard. Identifying the key control objectives will ensure the IT control is a critical part of the mapping exercise. It is imperative that subject matter expert in IT, operation, risk management and compliance all participate in assessing and defining the control key.

On this evaluation control, COBIT will be used as framework. According to Johannessen [5], COBIT explains an IT process and delivers the information that the business needs in achievement of the objective. COBIT consist 34 high level controls, which one for each IT process contained in four domains. COBIT focus on 4 parts, (1) management guidelines which ensure the effectively management between the business process and information system, (2) detailed control objective to maintaining the profitability in the

technology changing. (3) Audit Guidelines to analyze, assess, interpret, react, and implement the goals and objective of the company. And (4) implementation tools set contain a management awareness and IT control about FAQ and case studies.

According to Tugas [7], COBIT provide a guidance on ITG by setting the IT process, IT resources and information on strategies and objectives. COBIT is maintained by an independent, not-for-profit research institute, drawing on expertise, industry experts, and control security professional. COBIT also defines IT activities in generic process which is divided into four domains and 34 generic control processes. COBIT provides a maturity models to enable benchmarking and identification of necessary improvement.

According to ITGI [4], there will be seven information criteria in COBIT, such (1) effectiveness, (2) efficiency (3) confidentiality (4) integrity (5) availability (6) compliance (7) reliability. IT goals provide a business related and more refined basis to establish the business requirements and developing the metrics that allow the measurement against the goals. Then, for IT resources it will be four IT resources in COBIT: application, information, Infrastructure, and people. COBIT framework provides a reference process model and common language for everyone in an enterprise to view and manages the IT activities. COBIT have 4 main domain such: Planning and organize (PO) to provide direction to solution delivery (AI) and service delivery (DS), Acquire and Implement (AI) to provide the solution and passes them to be turned into service, Deliver and Support (DS) to receives the solution and make them usable by the end user, and Monitor and evaluate (ME) to monitor all the process to ensure the direction provided is allowed.

## 4. Research Result

After collected data process, we can get the total score of every process in the internal perspective. From PO-01 to PO-10 process for the maturity level model from level 0-5 and the information come from five respondents, we can see that in this level have a standard documentation procedure and has been communicated by the company and they starting to use the development system method but there's no maintenance from the management and it achieved in level 3. The score recap for PO-1 are level 1, 0.08, level 2 0,26, level 3 0,57, level 4 1,04, and level 5 1,7.In PO-02, the whole score are level 1 0,10 , level 2 0,36, level 3 0,42, level 4 0,92, and level 5 1,75. In PO-03, the whole scores are level 1 0,08 , level 2 0,40 , level 3 0,57 , level 4 0,84, level 5 1,60. Then, for PO 4 the whole scores are level 1 0 , level 2 0,28 , level 3 0,84 , level 4 1,12 , and level 5 1,50. For PO-05, the whole sores are level 1 0,05 , level 2 0,42 , level 3 0,69, level 4 0,84 , and level 5 1,50. Next for PO-06, the whole scores are level 1 0,13 , level 2 0,26 , level 3 0,48 , level 4 1,08 , and level 5 1,55. Then for PO-07 the whole scores are level 1 0,16 , level 2 0,40 , level 3 0,60 , level 4 0,80, and level 5 1,20. Last for PO-10, the scores are level 1 0,08, level 2 0,36 , level 3 0,66 , level 4 0,96, and level 5 1,40.

For Acquire and Implementation (AI) process from AI-01 until AI-07, the company achieved the maturity level in the level 3 which the company already have the standard procedure and being documented about the system development method but there's haven't any maintain from management. The detailed scores are: for AI-01, the whole scores are level 1 0,09 , level 2 0,28 , level 3 0,72, level 4 0,96, and level 5 1,45. For AI-02, the whole scores are level 1 0,12 , level 2 0,36, level 3 0,63, level 4 0,92, and level 5 1,30. Next at AI-03, the whole scores are level 1 0,12 , level 2 0,30, level 3 0,57, level 4 0,96, and level 5 1,50. For AI-04, the whole scores are level 1 0,08, level 2 0,12, level 3 0,57, level 4 1,28, level 5 1,75. At AI-05, the whole scores are level 1 0,16 , level 2 0,30, level 3 0,69 , level 4 0,92, and level 5 1,15. Then, for AI-06 the whole scores are level 1 0,08, level 2 0,30, level 3 0,45, level 4 1,08, and level 5 1,75. Last for AI-07, the whole scores are level 1 0,13, level 2 0,18, level 3 0,54, level 4 1,12 , and level 5 1,55.

Then, for Delivery and Support (DS) , process DS-01 until DS 9, then DS-11 and DS-13, the company achieved the maturity level in level 3, which the company already have a standard procedure and being communicated and documented but there's no maintain from management. the detail scores from the process are: at DS-01, the whole scores are level 1 0,03, level 2 0,24, level 3 0,57, level 4 1,32, level 5 1,65. At DS-03, the whole scores are level 1 0,05, level 2 0,34, level 3 0,69, level 4 1,04, and level 5 1,45. Then for DS-04, the whole scores are level 1 0,10, level 2 0,28, level 3 0,81, level 4 0,96, and level 5 1,25. Next for DS-05, the whole scores are level 1 0,12,level 2 0,12, level 3 0,63, level 4 1,12, and level 5 1,65. For DS-06 , the whole scores are level 1 0,10, level 2 0,38, level 3 0,69, level 4 1,00, and level 5 1,50. For DS-07, the whole scores are level 1 0,09, level 2 0,44, level 3 0,63, level 4 0,96, and level 5 1,20. At DS-08, the whole scores are level 1 0,09, level 2 0,38, level 3 0,60, level 4 1,08, and level 5 1,25. Then, at DS-09, the scores are level 1 0,20, level 2 0,30, level 3 0,48, level 4 0,92, and level 5 1,30. For DS-12 the scores are level 1 0,13, level 2 0,16, level 3 0,69, level 4 1,16, and level 5 1,35. Last for DS-13, the scores are level 1 0,08, level 2 0,40, level 3 0,66, level 4 1,00, and level 5 1,25. Then for DS-12, the company achieved the maturity in level 2 which the process already have been developed but there's no procedure in the company. The scores are level 1 0,21, level 2 0,30, level 3 0,54, level 4 0,68, and level 5 1,05.

Last, for Monitor and Evaluate (ME), the process will divided into 4 process which all the process achieved the maturity level in level 3, and it means that the company already have a standard procedure and being communicated and documented but there's no maintain from management. The detail scores are : at ME-01, the scores are level 1 0,20, level 2 0,22, level 3 0,57, level 4 0,96, and level 5 1,20. For ME-02, the scores are level 1 0,09, level 2 0,22, level 3 0,75, level 4 1,12, and level 5 1,35. Next ME-03 the scores are level 1 0,16, level 2 0,40, level 3 0,48, level 4 0,92, level 5 1,25. Last for ME-04, the scores are level 1 0,11, level 2 0,34, level 3 0,60, level 4 0,96, and level 5 1,20.

There's any Gap between the real of company and the expected value which company want to achieve. At PO process, the average of company reach 3,51, and the target of company is 3,50, so there's any gap 0,1. Next for AI process, the average of company achievement is 3,50 and the target was also 3,50 so there's no gap in this AI process. Then, for

DS process, company just achieved 3,43 and the target of company is 3,50, so there's any gap which 0,07. Last, for ME process the company achieved 3,28 and the target of company was 3,50, so there's any gap 0,22. From the questioner result, we can take that company haven't achieved the expected target, there's still any gap between the target and company condition in the reality, but the difference wasn't so far, so the company need to improve the efficiency and effectiveness to the system to achieve the target.

## 4. Conclusion

From this research we can take some conclusion. Information system savings in the company are good although further developments according to arising needs are recommended.

There are still some weaknesses in the Information System Savings that has been found, such as there is no procedure to protect the security system and the risk analysis still happened in the savings. Beside that the policy about the password application STU C 12.0 is not in its best mode since combination password is not enforced. Lastly, the company does not have a disposal procedure as of the time of research.

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